FILE 'HOME' ENTERED AT 09:04:23 ON 26 OCT 2004

=> biosis medline caplus wpids uspatfull BIOSIS IS NOT A RECOGNIZED COMMAND The previous command name entered was not recognized by the system. For a list of commands available to you in the current file, enter "HELP COMMANDS" at an arrow prompt (=>).

=> file biosis medline caplus wpids uspatfull

COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION

FULL ESTIMATED COST

0.42 0.42

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FILE 'MEDLINE' ENTERED AT 09:05:26 ON 26 OCT 2004

FILE 'CAPLUS' ENTERED AT 09:05:26 ON 26 OCT 2004 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'WPIDS' ENTERED AT 09:05:26 ON 26 OCT 2004 COPYRIGHT (C) 2004 THE THOMSON CORPORATION

FILE 'USPATFULL' ENTERED AT 09:05:26 ON 26 OCT 2004 CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

*** YOU HAVE NEW MAIL ***

=> s detect? (10a) ratio? (10a) nucleic acid? 3 FILES SEARCHED...

154 DETECT? (10A) RATIO? (10A) NUCLEIC ACID?

=> s l1 and elctro? (3a) label? 0 L1 AND ELCTRO? (3A) LABEL?

=> s l1 and electro? (4a) label? 4 FILES SEARCHED...

28 L1 AND ELECTRO? (4A) LABEL?

=> s 13 and differ? (5a) potential?

9 L3 AND DIFFER? (5A) POTENTIAL?

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AN

PROCESSING COMPLETED FOR L4

L5 9 DUP REM L4 (0 DUPLICATES REMOVED)

=> d 15 bib abs 1-9

ANSWER 1 OF 9 USPATFULL on STN L5

2004:13092 USPATFULL

TIMethods and apparati using single polymer analysis

Zhao, Xiaojian, Westford, MA, UNITED STATES IN Randall, Jeffrey D., Canton, MA, UNITED STATES Kundu, Bijit, Brookline, MA, UNITED STATES Kesty, Jessica, Seabrook, NH, UNITED STATES Gullans, Steve R., Natick, MA, UNITED STATES Chan, Eugene Y., Brookline, MA, UNITED STATES

Fuchs, Martin, Uxbridge, MA, UNITED STATES

PΙ US 2004009612 A1 20040115

ΑТ US 2003-448264 20030528 (10) Α1

```
20020528 (60)
PRAI
       US 2002-383968P
       US 2003-437892P
                           20030103 (60)
                           20030120 (60)
       US 2003-441334P
       US 2003-441337P
                           20030121 (60)
DT
       Utility
FS
       APPLICATION
LREP
       Maria A. Trevisan, Wolf, Greenfield & Sacks, P.C., 600 Atlantic Avenue,
       Boston, MA, 02210
       Number of Claims: 136
CLMN
       Exemplary Claim: 1
ECL
DRWN
       39 Drawing Page(s)
LN.CNT 3179
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The invention relates to methods for analyzing and characterizing single
       polymers such as nucleic acid molecules. In preferred embodiments, the
       single molecules are analyzed using single molecule detection and
       analysis systems.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     ANSWER 2 OF 9 USPATFULL on STN
       2003:265281 USPATFULL
ΑN
ΤI
       Expression monitoring by hybridization to high density oligonucleotide
       Fodor, Stephen P.A., Palo Alto, CA, UNITED STATES
IN
       Solas, Dennis W., San Francisco, CA, UNITED STATES
       Dower, William J., Menlo Park, CA, UNITED STATES
       AFFYMETRIX, INC. (U.S. corporation)
PA
ΡI
       US 2003186296
                          Α1
                               20031002
ΑI
       US 2003-367708
                          Α1
                               20030219 (10)
       Division of Ser. No. US 2001-851312, filed on 9 May 2001, GRANTED, Pat.
RLI
       No. US 6551784 Continuation-in-part of Ser. No. US 1995-529115, filed on
       15 Sep 1995, GRANTED, Pat. No. US 6040138 Continuation-in-part of Ser.
       No. US 1996-670118, filed on 25 Jun 1996, GRANTED, Pat. No. US 5800992
       Division of Ser. No. US 1993-168904, filed on 15 Dec 1993, ABANDONED
       Continuation of Ser. No. US 1990-624114, filed on 6 Dec 1990, ABANDONED
       Continuation-in-part of Ser. No. US 1989-362901, filed on 7 Jun 1989,
       ABANDONED
PRAI
       WO 1996-US14839
                           19960913
DT
       Utility
FS
       APPLICATION
       MORGAN LEWIS & BOCKIUS LLP, 1111 PENNSYLVANIA AVENUE, N.W., WASHINGTON,
LREP
       DC, 20004
CLMN
       Number of Claims: 22
ECL
       Exemplary Claim: 1
DRWN
       12 Drawing Page(s)
LN.CNT 7067
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention provides methods for comparing and identifying
AB
       differences in nucleic acid sequences using a plurality of sequence
       specific recognition reagents (i.e., probes comprising a nucleic acid
       complementary to a nucleic acid sequence in collections to be compared)
       bound to a solid surface.
```

ANSWER 3 OF 9 USPATFULL on STN

 L_5

```
AN 2003:258639 USPATFULL
TI 207 human secreted proteins
IN Ni, Jian, Germantown, MD, UNITED STATES
Ebner, Reinhard, Gaithersburg, MD, UNITED STATES
LaFleur, David W., Washington, DC, UNITED STATES
Moore, Paul A., Germantown, MD, UNITED STATES
Olsen, Henrik S., Gaithersburg, MD, UNITED STATES
```

```
Rosen, Craig A., Laytonsville, MD, UNITED STATES
Ruben, Steven M., Olney, MD, UNITED STATES
Soppet, Daniel R., Centreville, VA, UNITED STATES
Young, Paul E., Gaithersburg, MD, UNITED STATES
Shi, Yanggu, Gaithersburg, MD, UNITED STATES
Florence, Kimberly A., Rockville, MD, UNITED STATES
Wei, Ying-Fei, Berkeley, CA, UNITED STATES
Florence, Charles, Rockville, MD, UNITED STATES
Hu, Jing-Shan, Mountain View, CA, UNITED STATES
Li, Yi, Sunnyvale, CA, UNITED STATES
Kyaw, Hla, Frederick, MD, UNITED STATES
Fischer, Carrie L., Burke, VA, UNITED STATES
Ferrie, Ann M., Painted Post, NY, UNITED STATES
Fan, Ping, Potomac, MD, UNITED STATES
Feng, Ping, Gaithersburg, MD, UNITED STATES
Endress, Gregory A., Florence, MA, UNITED STATES
Dillon, Patrick J., Carlsbad, CA, UNITED STATES
Carter, Kenneth C., North Potomac, MD, UNITED STATES
Brewer, Laurie A., St. Paul, MN, UNITED STATES
Yu, Guo-Liang, Berkeley, CA, UNITED STATES
Zeng, Zhizhen, Lansdale, PA, UNITED STATES
Greene, John M., Gaithersburg, MD, UNITED STATES
US 2003181692
                   A1
                         20030925
US 2001-933767
                   A1
                         20010822 (9)
Continuation-in-part of Ser. No. WO 2001-US5614, filed on 21 Feb 2001,
PENDING Continuation-in-part of Ser. No. US 1998-205258, filed on 4 Dec
1998, PENDING
                     20000224 (60)
US 2000-184836P
US 2000-193170P
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US 1997-48885P
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US 1997-48877P
                     19970606 (60)
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PI

AΙ

RLI

PRAI

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US 1997-48878P
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                            19970905
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       US 1997-57628P
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       US 1997-57777P
       US 1997-57634P
                            19970905 (60)
       US 1997-70923P
                            19971218 (60)
       US 1998-92921P
                            19980715 (60)
       US 1998-94657P
                            19980730 (60)
       US 1997-70923P
                            19971218 (60)
       US 1998-92921P
                            19980715 (60)
       US 1998-94657P
                            19980730 (60)
       Utility
       APPLICATION
       HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
       Number of Claims: 23
       Exemplary Claim: 1
       10 Drawing Page(s)
LN.CNT 32746
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to novel human secreted proteins and
       isolated nucleic acids containing the coding regions of the genes
       encoding such proteins. Also provided are vectors, host cells,
       antibodies, and recombinant methods for producing human secreted
       proteins. The invention further relates to diagnostic and therapeutic
       methods useful for diagnosing and treating diseases, disorders, and/or
```

- L5 ANSWER 4 OF 9 USPATFULL on STN
- 2003:237907 USPATFULL AN

DT

FS

LREP CLMN

ECL

AB

DRWN

Compositions and methods for the therapy and diagnosis of colon cancer TI

conditions related to these novel human secreted proteins.

```
Meagher, Madeleine Joy, Seattle, WA, UNITED STATES
       Xu, Jiangchun, Bellevue, WA, UNITED STATES
       Secrist, Heather, Seattle, WA, UNITED STATES
       Jiang, Yuqiu, Kent, WA, UNITED STATES
PA
       Corixa Corporation, Seattle, WA, UNITED STATES, 98104 (U.S. corporation)
PΙ
       US 2003166064
                           Α1
                                 20030904
       US 2002-99926
                                 20020314 (10)
ΑI
                            Α1
       Continuation-in-part of Ser. No. US 2001-33528, filed on 26 Dec 2001,
RLI
       PENDING Continuation-in-part of Ser. No. US 2001-920300, filed on 31 Jul
       2001, PENDING
PRAI
       US 2001-302051P
                             20010629 (60)
       US 2001-279763P
                             20010328 (60)
                             20000803 (60)
       US 2000-223283P
DT
       Utility
FS
       APPLICATION
       SEED INTELLECTUAL PROPERTY LAW GROUP PLLC, 701 FIFTH AVE, SUITE 6300,
LREP
       SEATTLE, WA, 98104-7092
       Number of Claims: 17
CLMN
       Exemplary Claim: 1
ECL
       No Drawings
DRWN
LN.CNT 8531
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Compositions and methods for the therapy and diagnosis of cancer,
       particularly colon cancer, are disclosed. Illustrative compositions
       comprise one or more colon tumor polypeptides, immunogenic portions
       thereof, polynucleotides that encode such polypeptides, antigen
       presenting cell that expresses such polypeptides, and T cells that are specific for cells expressing such polypeptides. The disclosed
       compositions are useful, for example, in the diagnosis, prevention
       and/or treatment of diseases, particularly colon cancer.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L5
     ANSWER 5 OF 9 USPATFULL on STN
       2003:106233 USPATFULL
AN
TI
       Compositions and methods for the therapy and diagnosis of pancreatic
IN
       Benson, Darin R., Seattle, WA, UNITED STATES
       Kalos, Michael D., Seattle, WA, UNITED STATES
       Lodes, Michael J., Seattle, WA, UNITED STATES Persing, David H., Redmond, WA, UNITED STATES
       Hepler, William T., Seattle, WA, UNITED STATES
       Jiang, Yuqiu, Kent, WA, UNITED STATES
PA
       Corixa Corporation, Seattle, WA, UNITED STATES, 98104 (U.S. corporation)
PΙ
       US 2003073144
                           A1
                                 20030417
ΑI
       US 2002-60036
                           Α1
                                 20020130 (10)
PRAI
       US 2001-333626P
                             20011127 (60)
       US 2001-305484P
                             20010712 (60)
       US 2001-265305P
                             20010130 (60)
       US 2001-267568P
                             20010209 (60)
       US 2001-313999P
                             20010820 (60)
       US 2001-291631P
                             20010516 (60)
       US 2001-287112P
                             20010428 (60)
       US 2001-278651P
                             20010321 (60)
       US 2001-265682P
                             20010131 (60)
DT
       Utility
FS
       APPLICATION
LREP
       SEED INTELLECTUAL PROPERTY LAW GROUP PLLC, 701 FIFTH AVE, SUITE 6300,
       SEATTLE, WA, 98104-7092
       Number of Claims: 17
CLMN
ECL
       Exemplary Claim: 1
       No Drawings
DRWN
LN.CNT 14253
```

King, Gordon E., Shoreline, WA, UNITED STATES

IN

AB Compositions and methods for the therapy and diagnosis of cancer, particularly pancreatic cancer, are disclosed. Illustrative compositions comprise one or more pancreatic tumor polypeptides, immunogenic portions thereof, polynucleotides that encode such polypeptides, antigen presenting cell that expresses such polypeptides, and T cells that are specific for cells expressing such polypeptides. The disclosed compositions are useful, for example, in the diagnosis, prevention and/or treatment of diseases, particularly pancreatic cancer.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 6 OF 9 USPATFULL on STN L52002:272801 USPATFULL AN ΤI Compositions and methods for the therapy and diagnosis of colon cancer Stolk, John A., Bothell, WA, UNITED STATES Xu, Jiangchun, Bellevue, WA, UNITED STATES IN Chenault, Ruth A., Seattle, WA, UNITED STATES Meagher, Madeleine Joy, Seattle, WA, UNITED STATES Corixa Corporation, Seattle, WA, UNITED STATES, 98104 (U.S. corporation) PA PΙ US 2002150922 A1 20021017 AΙ US 2001-998598 A1 20011116 (9) US 2001-304037P PRAI 20010710 (60) US 2001-279670P 20010328 (60) US 2001-267011P 20010206 (60) US 2000-252222P 20001120 (60) DT Utility FS APPLICATION LREP SEED INTELLECTUAL PROPERTY LAW GROUP PLLC, 701 FIFTH AVE, SUITE 6300, SEATTLE, WA, 98104-7092 CLMN Number of Claims: 17 ECL Exemplary Claim: 1 DRWN No Drawings LN.CNT 9233

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Compositions and methods for the therapy and diagnosis of cancer, particularly colon cancer, are disclosed. Illustrative compositions comprise one or more colon tumor polypeptides, immunogenic portions thereof, polynucleotides that encode such polypeptides, antigen presenting cell that expresses such polypeptides, and T cells that are specific for cells expressing such polypeptides. The disclosed compositions are useful, for example, in the diagnosis, prevention and/or treatment of diseases, particularly colon cancer.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

LN.CNT 25718

```
L5
     ANSWER 7 OF 9 USPATFULL on STN
       2002:243051 USPATFULL
ΑN
ΤI
       Compositions and methods for the therapy and diagnosis of ovarian cancer
IN
       Algate, Paul A., Issaquah, WA, UNITED STATES
       Jones, Robert, Seattle, WA, UNITED STATES
       Harlocker, Susan L., Seattle, WA, UNITED STATES
PA
       Corixa Corporation, Seattle, WA, UNITED STATES, 98104 (U.S. corporation)
PT
       US 2002132237
                          Α1
                                20020919
       US 2001-867701
ΑI
                          A1
                                20010529 (9)
       US 2000-207484P
PRAI
                           20000526 (60)
DT
       Utility
FS
       APPLICATION
LREP
       SEED INTELLECTUAL PROPERTY LAW GROUP PLLC, 701 FIFTH AVE, SUITE 6300,
       SEATTLE, WA, 98104-7092
CLMN
       Number of Claims: 11
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
```

Compositions and methods for the therapy and diagnosis of cancer, particularly ovarian cancer, are disclosed. Illustrative compositions comprise one or more ovarian tumor polypeptides, immunogenic portions thereof, polynucleotides that encode such polypeptides, antigen presenting cell that expresses such polypeptides, and T cells that are specific for cells expressing such polypeptides. The disclosed compositions are useful, for example, in the diagnosis, prevention and/or treatment of diseases, particularly ovarian cancer.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 8 OF 9 USPATFULL on STN

AN 2002:191502 USPATFULL

TI Method for comparing nucleic acid sequences

IN Fodor, Stephen P.A., Palo Alto, CA, UNITED STATES Solas, Dennis W., San Francisco, CA, UNITED STATES Dower, William J., Menlo Park, CA, UNITED STATES

PI US 2002102567 A1 20020801 US 6551784 B2 20030422

AI US 2001-851312 A1 20010509 (9)

RLI Continuation of Ser. No. US 1996-772376, filed on 23 Dec 1996, GRANTED, Pat. No. US 6309822 Continuation-in-part of Ser. No. US 1995-529115, filed on 15 Sep 1995, GRANTED, Pat. No. US 6040138 A 371 of International Ser. No. WO 1996-US14839, filed on 13 Sep 1996, UNKNOWN Division of Ser. No. US 1993-168904, filed on 15 Dec 1993, ABANDONED Continuation of Ser. No. US 1990-624114, filed on 6 Dec 1990, UNKNOWN Continuation-in-part of Ser. No. US 1989-362901, filed on 7 Jun 1989, UNKNOWN

DT Utility

FS APPLICATION

LREP Pillsbury Winthrop LLP, Intellectual Property Group, 1600 Tysons Boulevard, McLean, VA, 22102

CLMN Number of Claims: 22 ECL Exemplary Claim: 1 DRWN 12 Drawing Page(s)

LN.CNT 7077

AN

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides methods for comparing and identifying differences in nucleic acid sequences using a plurality of sequence specific recognition reagents (i.e., probes comprising a nucleic acid complementary to a nucleic acid sequence in collections to be compared) bound to a solid surface.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 9 OF 9 USPATFULL on STN

2001:190900 USPATFULL

TI Method for comparing copy number of nucleic acid sequences

IN Fodor, Stephen P. A., Palo Alto, CA, United States Solas, Dennis W., San Francisco, CA, United States Dower, William J., Menlo Park, CA, United States

PA Affymetrix, Inc., Santa Clara, CA, United States (U.S. corporation)

PI US 6309822 B1 20011030

AI US 1996-772376 19961223 (8)

RLI Continuation-in-part of Ser. No. US 1990-670118, filed on 25 Jun 1990, now patented, Pat. No. US 5800992 Continuation-in-part of Ser. No. US 1999-529115, filed on 15 Sep 1999, now patented, Pat. No. US 6040138 Division of Ser. No. US 1993-168904, filed on 15 Dec 1993, now abandoned Continuation of Ser. No. US 1990-624114, filed on 6 Dec 1990, now abandoned Continuation-in-part of Ser. No. US 1989-362901, filed on 7 Jun 1989, now abandoned

PRAI WO 1996-US14839 19960913

DT Utility

FS GRANTED

EXNAM Primary Examiner: Zitomer, Stephanie

LREP Pillsbury Winthrop LLP
CLMN Number of Claims: 17
ECL Exemplary Claim: 1

DRWN 14 Drawing Figure(s); 12 Drawing Page(s)

LN.CNT 7686

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides methods for comparing and identifying differences in nucleic acid sequences using a plurality of sequence specific recognition reagents (i.e., probes comprising a nucleic acid complementary to a nucleic acid sequence in collections to be compared) bound to a solid surface.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d 15 9 kwic

L5 ANSWER 9 OF 9 USPATFULL on STN

DETD . . . than blotted arrays. Less target oligonucleotide is used to produce a given signal thereby dramatically improving the signal to noise ratio. Consequently the methods of this invention permit detection of only a few copies of a nucleic acid in extremely complex nucleic acid mixtures.

DETD . . . the probes of the high density array. The short RNA fragments are then separated from the long fragments (e.g., by electrophoresis), labeled if necessary as described above, and then are ready for hybridization with the high density probe array.

DETD . . . By testing the strength of interactions under various different conditions, the interaction of the promoter protein with each of the different potential binding sites may be analyzed. The spectrum of strength of interactions with each different potential binding site may provide significant insight into the types of features which are important in determining specificity.

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L2
              0 S L1 AND ELCTRO? (3A) LABEL?
L3
             28 S L1 AND ELECTRO? (4A) LABEL?
L4
              9 S L3 AND DIFFER? (5A) POTENTIAL?
L5
              9 DUP REM L4 (0 DUPLICATES REMOVED)
=> dup rem 13
PROCESSING COMPLETED FOR L3
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=> s 16 an electroconductive
MISSING OPERATOR L6 AN
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.
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=> s 18 not 15
            11 L8 NOT L5
=> d 19 bib abs 1-11
L9
     ANSWER 1 OF 11 USPATFULL on STN
ΑN
       2004:215406 USPATFULL
TI
       Detection of target molecules through interaction with probes
IN
       Puskas, Robert Steven, Manchester, MO, UNITED STATES
PA
       Singulex, Inc. (U.S. corporation)
PΙ
       US 2004166514
                               20040826
                          Α1
       US 2003-720044
                               20031119 (10)
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PRAI
       US 2002-427233P
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       US 2002-427234P
                           20021119 (60)
       US 2002-427232P
                           20021119 (60)
DT
       Utility
FS
       APPLICATION
LREP
       SONNENSCHEIN NATH & ROSENTHAL LLP, P.O. BOX 061080, WACKER DRIVE
       STATION, SEARS TOWER, CHICAGO, IL, 60606-1080
CLMN
       Number of Claims: 57
ECL
       Exemplary Claim: 1
DRWN
       7 Drawing Page(s)
LN.CNT 2134
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       A method for detecting a target nucleic acid molecule or target nucleic
       acid molecular complex comprising: (a) contacting two or more probes
       complementary to the molecule or molecular complex, said molecule or
       molecular complex being labeled with one or more fluorescent dye
       molecules of the same dye or labeled with two dyes that are
       indistinguishable by their emission characteristics in an assay
       instrument, wherein each probe interacts specifically with a different
       target nucleic acid sequence or a structure on the molecule or molecular
       complex; and (b) detecting interaction of the probes with the molecule
       or molecular complex, said interaction being detected by an increase in
       fluorescence intensity during a detection interval having a fluorescence
```

intensity above the fluorescence intensity of any individual free probe,

wherein molecule or molecular complex is analyzed such that only individual molecules or molecular complexes in contact with a probe are within an interrogation volume and within a detection time interval.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
T.9
     ANSWER 2 OF 11 USPATFULL on STN
AN
       2004:76571 USPATFULL
       Methods for identifying nucleotides at defined positions in target
ΤI
       nucleic acids
IN
       Van Ness, Jeffrey, Claremont, CA, UNITED STATES
       Galas, David J., Claremong, CA, UNITED STATES
       Garrison, Lori K., Claremont, CA, UNITED STATES
PΤ
       US 2004058349
                          Αl
                               20040325
       US 2003-398004
ΑI
                          Α1
                               20030910 (10)
       WO 2001-US30742
                               20011001
DT
       Utility
FS
       APPLICATION
LREP
       SEED INTELLECTUAL PROPERTY LAW GROUP PLLC, 701 FIFTH AVE, SUITE 6300,
       SEATTLE, WA, 98104-7092
CLMN
       Number of Claims: 65
ECL
       Exemplary Claim: 1
DRWN
       7 Drawing Page(s)
LN.CNT 2799
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The identity of a nucleotide of interest in a target nucleic acid
```

molecule is determined by combining the target with two primers, where the first primer hybridizes to and extends from a location 3' of the nucleotide of interest in the target, so as to incorporate the complement of the nucleotide of interest in a first extension product. The second primer then hybridizes to and extends based on the first extension product, at a location 3' of the complement of the nucleotide of interest, so as to incorporate the nucleotide of interest in a second extension product. The first primer then hybridizes to and extends from a location 3' of the nucleotide of interest in the second extension product, so as to form, in combination with the second extension product, a nucleic acid fragment. The first and second primers are designed to incorporate a portion of the recognition sequence of a restriction endonuclease that recognizes a partially variable interrupted base sequence. i.e. a sequence of the form A-B-C where A and C are a number and sequence of bases essential for RE recognition, and B is a number of bases essential for RE recognition. The first primer incorporates the sequence A, the second primer incorporates the sequence C, and they are designed, in view of the target, to product a nucleic acid fragment where sequences A and C are separated by the bases B, where the nucleotide of interest is within region B. Action of the RE on the nucleic acid fragment provides a small nucleic acid fragment that is amendable to characterization, to thereby reveal the identity of the nucleotide of interest.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
L9
     ANSWER 3 OF 11 USPATFULL on STN
       2004:25163 USPATFULL
AN
ΤI
       Methods for parallel measurement of genetic variations
IN
       Van Ness, Jeffrey, Claremont, CA, UNITED STATES
       Galas, David J, Claremont, CA, UNITED STATES
       Garrison, Lori K, Claremont, CA, UNITED STATES
PΙ
       US 2004019005
                          A1
                               20040129
AΙ
       US 2003-398006
                          A1
                               20030703 (10)
       WO 2001-US42432
                               20011001
DT
       Utility
FS
       APPLICATION
       SEED INTELLECTUAL PROPERTY LAW GROUP PLLC, 701 FIFTH AVE, SUITE 6300,
LREP
```

SEATTLE, WA, 98104-7092 Number of Claims: 159 Exemplary Claim: 1

ECL Exemplary Claim: 1 DRWN 24 Drawing Page(s)

LN.CNT 4262

CLMN

AΒ

L9

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The identity of a nucleotide of interest in a target nucleic acid molecule is determined by combining the target with two primers. The first primer is immobilized to a substrate and hybridizes to and extends from a location 3' of the nucleotide of interest in the target, so as to incorporate the complement of the nucleotide of interest in a first extension product. The second primer then hybridizes to and extends based on the first extension product, which is immobilized to the substrate via the first primer, at a location 3' of the complement of the nucleotide of interest, so as to incorporate the nucleotide of interest in a second extension product. The second extension product then dissociates from the first extension product and thus from the substrate and re-hybridizes to another first primer molecule that has not extended. The non-extended first primer then extends from a location 3' of the nucleotide of interest in the second extension product, so as to form, in combination with the second extension product, a double-stranded nucleic acid fragment. The first and second primers are designed to incorporate a portion of the recognition sequence of a restriction endonuclease (RE) that recognizes a partially variable interrupted nucleotide sequence, i.e., a sequence of the form D-N-S where D and S refer to specific nucleotide sequences essential for RE recognition, and N is a sequence consisting of n viable nucleotides also required for RE recognition. The first primer incorporates the sequence D, the second primer incorporates the sequence S, and they are designed, in view of the target, to product a nucleic acid fragment where constant sequences D and S are separated by variable sequence N, where the nucleotide of interest is within region N. Action of the RE on the nucleic acid fragment provides a small nucleic acid fragment that is amendable to characterization, to thereby reveal the identity of the nucleotide of interest.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 4 OF 11 USPATFULL on STN

AN 2003:93005 USPATFULL
TI Nucleic acid analysis techniques
IN Lockhart, David J., Santa Clara, CA, UNITED STATES
Chee, Mark, Palo Alto, CA, UNITED STATES
Gunderson, Kevin, Palo Alto, CA, UNITED STATES
Lai, Chaoqiang, Santa Clara, CA, UNITED STATES
Wodicka, Lisa, Santa Clara, CA, UNITED STATES
Cronin, Maureen T., Los Altos, CA, UNITED STATES

Lee, Danny H., San Jose, CA, UNITED STATES
Tran, Huu M., San Jose, CA, UNITED STATES

Matsuzaki, Hajime, Palo Alto, CA, UNITED STATES McGall, Glenn H., Mt. View, CA, UNITED STATES

Barone, Anthony D., San Jose, CA, UNITED STATES

PI US 2003064364 A1 20030403

AI US 2002-880727 A1 20020411 (9)

RLI Continuation of Ser. No. US 1997-882649, filed on 25 Jun 1997, GRANTED, Pat. No. US 6344316 Continuation of Ser. No. WO 1997-US1603, filed on 22 Jan 1997, UNKNOWN

PRAI US 1996-10471P 19960123 (60) US 1997-35170P 19970109 (60)

DT Utility

FS APPLICATION

LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834

CLMN Number of Claims: 49

ECL Exemplary Claim: 1
DRWN 47 Drawing Page(s)

LN.CNT 6539

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention provides a simplified method for identifying differences in nucleic acid abundances (e.g., expression levels) between two or more samples. The methods involve providing an array containing a large number (e.g. greater than 1,000) of arbitrarily selected different oligonucleotide probes where the sequence and location of each different probe is known. Nucleic acid samples (e.g. mRNA) from two or more samples are hybridized to the probe arrays and the pattern of hybridization is detected. Differences in the hybridization patterns between the samples indicates differences in expression of various genes between those samples. This invention also provides a method of end-labeling a nucleic acid. In one embodiment, the method involves providing a nucleic acid, providing a labeled oligonucleotide and then enzymatically ligating the oligonucleotide to the nucleic acid. Thus, for example, where the nucleic acid is an RNA, a labeled oligoribonucleotide can be ligated using an RNA ligase. In another embodiment, the end labeling can be accomplished by providing a nucleic acid, providing labeled nucleoside triphosphates, and attaching the nucleoside triphosphates to the nucleic acid using a terminal transferase.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 5 OF 11 USPATFULL on STN

AN 2003:79642 USPATFULL

TI Novel computation with nucleic acid molecules, computer and software for computing

IN Sakakibara, Yasubumi, Tokyo, JAPAN Morimoto, Nobuhiko, Hachioji-shi, JAPAN Suyama, Akira, Hachioji-shi, JAPAN

PA OLYMPUS OPTICAL CO., LTD., TOKYO, JAPAN (non-U.S. corporation)

PI US 2003055571 A1 20030320

AI US 2002-159475 A1 20020531 (10)

RLI Continuation-in-part of Ser. No. US 2001-893205, filed on 27 Jun 2001, PENDING

PRAI JP 2000-382449 20001215 JP 2000-399415 20001227

DT Utility FS APPLICATION

LREP Scully, Scott, Murphy & Presser, 400 Garden City Plaza, Garden City, NY, 11530-0299

CLMN Number of Claims: 42 ECL Exemplary Claim: 1 DRWN 22 Drawing Page(s)

LN.CNT 3410

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is to provide a molecular computer comprising an electronic operation section and a molecular operation section, wherein, in addition to general computation processing, said electronic operation section controls a function of the molecular operation section substantially, and the molecular operation is performed under control thereof.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 6 OF 11 USPATFULL on STN

AN 2002:221319 USPATFULL

TI Novel computation with nucleic acid molecules, computer and software for computing

IN Suyama, Akira, Hachioji-shi, JAPAN Sakakibara, Yasubumi, Tokyo, JAPAN

Morimoto, Nobuhiko, Hachioji-shi, JAPAN OLYMPUS OPTICAL CO., LTD., TOKYO, JAPAN (non-U.S. corporation) PA PΤ US 2002119458 A120020829 ΑI US 2001-893205 A1 20010627 (9) PRAI JP 2000-382449 20001215 JP 2000-399415 20001227 DT Utility FS APPLICATION Scully, Scott, Murphy & Presser, 400 Garden City Plaza, Garden City, NY, LREP 11530-0299 $\mathtt{CL} \breve{\mathtt{M}} \mathtt{N}$ Number of Claims: 24 ECL Exemplary Claim: 1 DRWN 14 Drawing Page(s) LN.CNT 2520 CAS INDEXING IS AVAILABLE FOR THIS PATENT. The present invention is to provide an information processing method using an operational nucleic acid, which comprises (a) converting arbitrary information into a nucleic acid molecule, (b) hybridizing the nucleic acid molecule obtained in (a) to an operational nucleic acid designed so as to express a logical equation indicating a condition to be detected, and extending the nucleic acid molecule hybridized, and (c) detecting a binding profile of the nucleic acid molecule included in the nucleic acid molecule extended in (b), thereby evaluating whether a solution of the logical equation is true or false. The present invention further provides an apparatus and a program for performing the information processing method. CAS INDEXING IS AVAILABLE FOR THIS PATENT. ANSWER 7 OF 11 USPATFULL on STN L9 2002:24160 USPATFULL ANTTNucleic acid analysis techniques IN Lockhart, David J., Santa Clara, CA, United States Chee, Mark, Palo Alto, CA, United States Gunderson, Kevin, Palo Alto, CA, United States Chaoqiang, Lai, Santa Clara, CA, United States Wodicka, Lisa, Santa Clara, CA, United States Cronin, Maureen T., Los Altos, CA, United States Lee, Danny, San Jose, CA, United States Tran, Huu M., San Jose, CA, United States Matsuzaki, Hajime, Palo Alto, CA, United States Affymetrix, Inc., Santa Clara, CA, United States (U.S. corporation) PAPΤ US 6344316 B120020205 US 1997-882649 AΙ 19970625 (8) Continuation of Ser. No. WO 1997-US1603, filed on 22 Jan 1997 RLI PRAI US 1997-35170P 19970109 (60) US 1996-10471P 19960123 (60) Utility DT FS GRANTED EXNAM Primary Examiner: Houtteman, Scott W. Townsend and Townsend and Crew LLP LREP Number of Claims: 28 CLMN Exemplary Claim: 1 ECL DRWN 54 Drawing Figure(s); 47 Drawing Page(s) LN.CNT 6540 CAS INDEXING IS AVAILABLE FOR THIS PATENT. The present invention provides a simplified method for identifying AB differences in nucleic acid abundances (e.g., expression levels) between two or more samples. The methods involve providing an array containing a large number (e.g. greater than 1,000) of arbitrarily selected different oligonucleotide probes where the sequence and location of each different probe is known. Nucleic acid samples (e.g. mRNA) from two or more

samples are hybridized to the probe arrays and the pattern of

hybridization is detected. Differences in the hybridization patterns

between the samples indicates differences in expression of various genes between those samples. This invention also provides a method of end-labeling a nucleic acid. In one embodiment, the method involves providing a nucleic acid, providing a labeled oligonucleotide and then enzymatically ligating the oligonucleotide to the nucleic acid. Thus, for example, where the nucleic acid is an RNA, a labeled oligoribonucleotide can be ligated using an RNA ligase. In another embodiment, the end labeling can be accomplished by providing a nucleic acid, providing labeled nucleoside triphosphates, and attaching the nucleoside triphosphates to the nucleic acid using a terminal transferase.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
ANSWER 8 OF 11 USPATFULL on STN
L9
       2001:178820 USPATFULL
AN
TI
       Organic semiconductor recognition complex and system
IN
       Kiel, Johnathan L., Universal City, TX, United States
       Bruno, John G., San Antonio, TX, United States
       Parker, Jill E., Floresville, TX, United States
       Alls, John L., San Antonio, TX, United States
       Batishko, Charles R., Richland, WA, United States
       Holwitt, Eric A., San Antonio, TX, United States
PA
       Conceptual Mind Works, Inc., San Antonio, TX, United States (U.S.
       corporation)
PΙ
       US 6303316
                                20011016
       US 2000-608706
                                20000630 (9)
AΙ
PRAI
       US 1999-142301P
                           <sup>'</sup>19990702 (60)
       US 2000-199620P
                           20000425 (60)
DT
       Utility
       GRANTED
EXNAM
       Primary Examiner: Horlick, Kenneth R.
       Blakely, Sokoloff, Taylor & Zafman
LREP
CLMN
       Number of Claims: 62
ECL
       Exemplary Claim: 1
DRWN
       31 Drawing Figure(s); 15 Drawing Page(s)
LN.CNT 3322
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
```

AB In a recognition complex system, nucleic acid ligands comprising random DNA sequences are operatively coupled to an organic semiconductor and distributed so as to form an array of recognition complexes. When an unknown chemical or biological analyte is applied to the array, the electrical and/or photochemical properties of one or more of the recognition complexes are altered upon binding of the nucleic acid ligand to the analyte. The degree to which the electrical and/or photochemical properties change is a function of the affinity of the nucleic acid ligand sequence for the analyte. The electrical and photochemical changes associated with the array, as a whole, can be used as a unique signature to identify the analyte. In certain embodiments, an iterative process of selection and amplification of nucleic acid ligands that bind to the analyte can be used to generate a new array with greater affinity and specificity for a target analyte, or to produce one or more nucleic acid ligands with high binding affinity for an analyte. The present invention also provides methods for preparing nucleic acid ligands that bind with high affinity to an analyte and using such nucleic acid ligands to neutralize the analyte.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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L9 ANSWER 9 OF 11 USPATFULL on STN
AN 1999:132581 USPATFULL
TI Gene detection method
IN Hashimoto, Koji, Yokohama, Japan
Ito, Keiko, Kawasaki, Japan
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Ishimori, Yoshio, Tokyo, Japan
       Kabushiki Kaisha Toshiba, Kawasaki, Japan (non-U.S. corporation)
PA
PΤ
       US 5972692
                               19991026
       US 1997-886161
AΙ
                               19970630 (8)
       Division of Ser. No. US 1993-167113, filed on 16 Dec 1993, now patented,
RLI
       Pat. No. US 5776672 which is a continuation-in-part of Ser. No. US
       1991-766064, filed on 27 Sep 1991, now abandoned
PRAI
       JP 1990-259011
                          19900928
       JP 1991-90879
                           19910422
       JP 1991-191868
                           19910731
DT
       Utility
FS
       Granted
EXNAM
       Primary Examiner: Campbell, Eggerton A.
       Oblon, Spivak, McClelland, Maier & Neustadt, P.C.
LREP
       Number of Claims: 7
CLMN
ECL
       Exemplary Claim: 1
DRWN
       10 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 3248
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       A single stranded nucleic acid probe having a base sequence
       complementary to the gene to be detected is immobilized onto the surface
       of an electrode or the tip of an optical fiber, and the nucleic probe is
       reacted with the gene sample denatured to a single stranded form, and
       then the nucleic acid probe hybridized with the gene is detected. In
       this procedure, to the reaction system consisting of the nucleic acid
       probe and the gene sample, a double stranded nucleic acid recognizing
       substance capable of binding specifically to the double stranded nucleic
       acid and being active electrochemically or optically is added. The
       detection of the nucleic acid probe is conducted by electrochemical or
       optical determination utilizing the electrode or optical fiber mentioned
       above. By this method, safer and more convenient detection of the gene
       is possible at a higher sensitivity even in a reduced time period.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L9
     ANSWER 10 OF 11 USPATFULL on STN
AN
       1998:78923 USPATFULL
TI
       Gene detection method
       Hashimoto, Koji, Yokohama, Japan
IN
       Ito, Keiko, Kawasaki, Japan
       Ishimori, Yoshio, Tokyo, Japan ,
       Gotoh, Masanori, Tokyo, Japan
       Kabushiki Kaisha Toshiba, Kawasaki, Japan (non-U.S. corporation)
PΑ
PΙ
       US 5776672
                               19980707
AΙ
       US 1993-167113
                               19931216 (8)
       Continuation-in-part of Ser. No. US 1991-766064, filed on 27 Sep 1991
RLI
       JP 1990-259011 19900928
PRAI
       JP 1991-90879
                           19910422
       JP 1991-191868
                           19910731
DT
       Utility
FS
       Granted
EXNAM
      Primary Examiner: Campbell, Eggerton A.
LREP
       Oblon, Spivak, McClelland, Maier & Neustadt, P.C.
CLMN
      Number of Claims: 9
ECL
       Exemplary Claim: 1
       10 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 3246
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       A single stranded nucleic acid probe having a base sequence
      complementary to the gene to be detected is immobilized onto the surface
      of an electrode or the tip of an optical fiber, and the nucleic probe is
       reacted with the gene sample denatured to a single stranded form, and
       then the nucleic acid probe hybridized with the gene is detected. In
       this procedure, to the reaction system consisting of the nucleic acid
```

probe and the gene sample, a double stranded nucleic acid recognizing substance capable of binding specifically to the double stranded nucleic acid and being active electrochemically or optically is added. The detection of the nucleic acid probe is conducted by electrochemical or optical determination utilizing the electrode or optical fiber mentioned above. By this method, safer and more convenient detection of the gene is possible at a higher sensitivity even in a reduced time period.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
ANSWER 11 OF 11 USPATFULL on STN
L9
       1998:30859 USPATFULL
ΑN
ТT
       Adduct protection assay
TNI
       Becker, Michael, San Diego, CA, United States
       Nelson, Norman C., San Diego, CA, United States
       Gen-Probe Incorporated, San Diego, CA, United States (U.S. corporation)
PA
       US 5731148
                               19980324
PΤ
       US 1995-478221
                               19950607 (8)
AΤ
DT
       Utility
FS
       Granted
EXNAM
      Primary Examiner: Jones, W. Gary; Assistant Examiner: Atzel, Amy
LREP
       Lyon & Lyon LLP
CLMN
       Number of Claims: 36
ECL
       Exemplary Claim: 1
DRWN
       5 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 1534
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
```

The present invention features an adduct protection assay involving the use of a labelled binding partner and a signal altering ligand. The signal altering ligand can preferentially alter the ability of label which is not part of a binding partner: analyte complex to produce a detectable signal, compared to its ability to alter signal produced from label which is part of a binding partner: analyte complex. The presence or amount of analyte can be determined by detecting the signal produced from unaltered label. The adduct protection assay is very versatile. For example, alteration of signal can be carried out under a wide range of conditions (e.g., pH, temperature, and ionic strength), and both label alteration and signal triggering can be carried out at essentially constant temperature to achieve a high degree of sensitivity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
=> s electroconductive label?
            19 ELECTROCONDUCTIVE LABEL?
=> s 110 and nucleic acid?
   3 FILES SEARCHED...
            14 L10 AND NUCLEIC ACID?
=>
=> dup rem 111
PROCESSING COMPLETED FOR L11
             14 DUP REM L11 (0 DUPLICATES REMOVED)
=> s 112 and ratio?
             3 L12 AND RATIO?
=> d 113 bib abs 1-3
L13 ANSWER 1 OF 3 USPATFULL on STN
       2002:148576 USPATFULL
NΑ
       Method for detecting nucleic acids
TТ
       Makino, Yoshihiko, Saitama, JAPAN
IN
       Abe, Yoshihiko, Saitama, JAPAN
Ogawa, Masashi, Tokyo, JAPAN
Takagi, Makoto, Fukuoka, JAPAN
       Takenaka, Shigeori, Fukuoka, JAPAN
       Yamashita, Kenichi, Fukuoka, JAPAN
PΙ
       US 2002076717
                         A1
                                20020620
ΑI
       US 2001-887625
                          A1
                                20010622 (9)
PRAI
       JP 2000-187486
                           20000622
DT
       Utility
FS
       APPLICATION
       REED SMITH LLP, 375 Park Avenue, New York, NY, 10152
LREP
CLMN
       Number of Claims: 8
ECL
       Exemplary Claim: 1
DRWN
       3 Drawing Page(s)
LN.CNT 552
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB ·
       A method of detecting nucleic acid fragments in
       plural samples is performed by the steps of: attaching an
       electroconductive label to nucleic
       acid fragments in one sample and attaching a different
       electroconductive label to nucleic
       acid fragments in another sample; preparing a mixture of these
       samples; spotting the mixture on an electroconductive microarray having
       plural electrodes onto which probe molecules complementary to the
       nucleic acid fragments are fixed, so that
       hybridization between the nucleic acid fragments and
       the probe molecules on the electroconductive microarray can proceed to
       form hybrid structures; applying to the electrode an electric potential
       corresponding to the oxidation-reduction potential of the former label
       and detecting on the electrode an electric current; applying to the
       electrode an electric potential corresponding to the oxidation-reduction
       potential of the latter label and detecting on the electrode an electric
       current; and comparing the electric current detected in the former
       detecting procedure and that detected in the latter detecting procedure.
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T-13 ANSWER 2 OF 3 USPATFULL on STN AN 2002:72605 USPATFULL ΤI Fixation of nucleotide derivatives to solid carrier IN Iwaki, Yoshihide, Saitama, JAPAN Makino, Yoshihiko, Saitama, JAPAN

Shinoki, Hiroshi, Saitama, JAPAN Kuhara, Satoru, Fukuoka, JAPAN Tashiro, Kosuke, Fukuoka, JAPAN Muta, Shigeru, Fukuoka, JAPAN PΙ US 2002039742 A120020404 ΑI US 2001-927697 A1 20010809 (9) PRAI JP 2000-241773 20000809 JP 2001-161199 20010529 DT Utility FS APPLICATION REED SMITH LLP, 375 PARK AVENUE, NEW YORK, NY, 10152 LREP CLMN Number of Claims: 16 ECL Exemplary Claim: 1 2 Drawing Page(s) DRWN LN.CNT 890 CAS INDEXING IS AVAILABLE FOR THIS PATENT. A micro-array for analysis of DNA is prepared by the steps of spotting onto a solid carrier in its predetermined area in which plural reactive groups are fixed an aqueous solution which contains a thickening agent and probe molecules (e.g., DNA fragments) having a group reactive with the reactive group of the solid carrier to produce covalent bonding; spotting onto the solid carrier in a different area having the same reactive groups an aqueous solution (same or different); incubating the aqueous solution-spotted solid carrier to produce the covalent bondings; and washing the solid carrier with an aqueous medium to remove the thickening agent from the solid carrier. An electrostatic bonding can be utilized in place of the covalent bonding. CAS INDEXING IS AVAILABLE FOR THIS PATENT. ANSWER 3 OF 3 USPATFULL on STN L13 2001:233294 USPATFULL ΑN TΙ DNA chip and reactive electrode Makino, Yoshihiko, Saitama, Japan IN Abe, Yoshihiko, Saitama, Japan Ogawa, Masashi, Tokyo, Japan Fuji Photo Film Co., Ltd. (non-U.S. corporation) PAPΙ US 2001053522 A1 20011220 AΙ US 2001-845403 A1 20010430 (9) JP 2000-130090 20000428 PRAI DTUtility FS APPLICATION Jules Goldberg, Jules E. Goldberg, Esq., REED SMITH LLP, 375 Park LREP Avenue, New York, NY, 10152 CLMN Number of Claims: 33 Exemplary Claim: 1 ECL DRWN 2 Drawing Page(s) LN.CNT 1224 CAS INDEXING IS AVAILABLE FOR THIS PATENT. A nucleic acid detective means composed of an electrode and plural peptide nucleic acids which are fixed onto the electrode via covalent bonding is favorably employed for electrochemically detecting complementary DNA fragments The covalent bonding between the electrode and the peptide nucleic acids are favorably produced by the reaction between a reactive hydrogen-containing group attached to the peptide nucleic acid and a vinylsulfonyl group or a reactive precursor thereof

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

attached to the electrode.